

NEW SHEET

### ABSTRACT

A process for the preparation of a dispersion of crystalline nanoparticles in an aqueous medium is disclosed. Specifically, a first solution comprising a substantially water-insoluble substance in a water-miscible organic solvent is rapid mixed with an aqueous phase comprising water, and optionally a stabiliser, to form a dispersion of amorphous particles. The dispersion of amorphous particles is then sonicated for a sufficient period to form crystalline nanoparticles of the substantially water-insoluble substance. The process provides nanocrystals with a mean hydrodynamic diameter of less than 1 micron, particularly less than 300 nm, and is particularly useful for the preparation of nanocrystalline dispersions of pharmaceutical substances.